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From Prof. J. Cobb, dated Louisville, Kentucky, February 6th, 1849, acknowledging the receipt of his notice of election as Correspondent.

From Dr. Berendt, dated Dantzig, 1st October, 1848, accompanying a copy of the first Number of his work on Fossil Remains found in Amber, this evening presented, and requesting exchange of North American fossils of the same description for those of Europe.

Mr. Cassin presented a Catalogue of the *Vulturidæ* and *Strigidæ* in the Collection of the Academy, intended for publication in the Proceedings. Referred to a Committee, consisting of Drs. Wilson, Gambel and Townsend.

Professor Agassiz made some observations on the remarkable resemblance of the existing North American Fauna and Flora to that of the Tertiary period of the Old World.

February 20*th*, 1849.

Dr. B. H. COATES in the Chair.

Mr. Cassin read a paper entitled "Descriptions of new species of the genera *Nyctale* and *Sycobius*, specimens of which are in the Collection of the Acad. Nat. Sci. of Philadelphia." Referred to a Committee, consisting of Dr. Wilson, Dr. Gambel, and Dr. Bridges.

Mr. Conrad read a paper entitled "Descriptions of new fresh-water and marine Shells," which was referred to Mr. Phillips, Dr. Griffith, and Dr. Gambel.

Mr. Cassin read some "Notes of an examination of the families Vulturidæ and Strigidæ in the Collection of the Acad. Nat. Sci. of Philadelphia." Referred to the Committee on the previous paper of this evening.

Dr. Hallowell presented a communication entitled "Notes of the post-mortem appearances of a *Cynocephalus?* which died in the Menagerie at Philadelphia." Referred to Drs. Leidy, Keller and Gambel.

February 27*th*, 1849.

Dr. BRIDGES in the Chair.

The Committee on Mr. Cassin's "Catalogue of the Vulturidæ and Strigidæ in the Collection of the Academy of Natural Sciences of Philadelphia," reported in favor of publication.

[This paper will be found at the end of the present number, and is the commencement of a series of similar catalogues of the families in the Ornithological collection of the Academy, which it is the design of the Committee on that department to prepare for publication as soon as possible.]

The Committee on the following paper by Dr. Hallowell, reported in favor of publication.

Notes of the post mortem appearances of a Cynocephalus? which died in the Menagerie at Philadelphia.

By Edward Hallowell, M. D.

Head.—Brain not examined.

Thorax.—There are three lobes to the right lung and three to the left. They present a reddish brown color, mottled with grey, and are crepitant except at the base of the lower lobe of the right, which is firm and resisting to the touch. The surface of both lungs is studded with tubercles, deposited beneath the pleural covering. But few are observed in the lobes of the left, or the upper lobes of the right, but they are thickly agglomerated in the *lowest* lobe of the latter, which is filled with them; they are of a light yellow color, from one line and less to nearly a line in diameter, firm to the touch, and imbedded in a hepatized tissue. The mucous membrane of the trachea and bronchi, traced to the smallest ramifications of the latter, does not present any remarkable degree of redness, being rather pale than otherwise. The bronchial glands are enlarged and tuberculous; the largest is to the right of the trachea, and measures six lines in its greatest extent; on cutting into it, a quality of white cheesy matter makes its escape. Mucous membrane of the œsophagus pale. The heart is small, measuring one inch four lines in length, by one inch (Fr.) in breadth. The pericardium contains about a teaspoonful of citron-colored serosity. The auricles are moderately distended with dark colored blood; a solitary tubercle about the size of a pin's head is observed at the entrance of the vena cava into the right auricle.

Abdomen.—The liver has four distinct lobes and a smaller lobule; it is of a light brown color above, dark green beneath, except in the interspace between the lobes; it presents numerous tuberculous deposits upon its upper and under surface, of a larger size than are usually met with in the liver—the largest upon the under surface measuring five lines in diameter: on cutting into several of them they are found to be filled with tuberculous matter, of a yellowish colour tinged with green. The *spleen* is very greatly enlarged, measuring three inches three lines in length, by one and three-quarters in breadth; it is of a pale reddish color mottled with white, having its surface throughout studded with tubercles; the central portion, on cutting into it, presents the dark-colored appearance usually observed in the spleen, and four or five nodules of tuberculous matter; upon the periphery of the organ the deposit appears to exist in the form of infiltration, extending four lines within its substance at its posterior extremity. The *stomach* does not differ materially in shape from the human, and when laid open, measures four inches (Fr.) from one extremity to the other; there is a well marked pylorus; the œsophagus enters the stomach about midway between the pylorus and the opposite extremity; its muscular fibres are very apparent; it contains a quantity of greenish looking fluid, having a disagreeable odour; the mucous membrane is pale throughout, and does not appear softened, presenting no trace whatever of inflamation; no tubercles are observed upon its surface. The *small intestine* is five feet six and a half inches (Fr.) in extent; it has no valvulæ conniventes, neither does it present any glands of Peyer, nor are any solitary glands observed; the intestine, slit up its entire length, is perfectly pale, both upon its external and inner surface, and no softening of the mucous membrane is noticed; it contains a quantity of greenish fluid; no yellowish matter is observed at its upper extremity; it contains no tubercles, and there are no ulcerations. The *large intestine* is two feet two and a half inches in extent; there is a distinct cœcum, but no appendicula vermiformis; it contains a quantity of greenish looking fluid, similar to that in the small intestine; the mucous membrane throughout is quite pale, and appears to be healthy; held up to the light the mucous follicles are very distinct, but are not very abundant, and are more irregular in their outline than those of the human subject; they are surrounded by a dark-colored border, and several dark points are observed within the circumference of the greater number, (in some of them there are as many as six) *Mesenteric glands* more or less tuberculous, and yet the animal does not appear greatly emaciated; the disease appears to be more fully developed in these glands than in any of the other organs; one of them is much enlarged, measuring fourteen lines by thirteen in size; adherent to it is another thirteen lines by ten; these glands are filled with a white homogenous matter, of the consistence of thick cream; no marks of inflammation are found to exist in any part of the body, except in the lowest lobe of the right lung, where the tubercles are thickly agglomerated, the tissue of the organ being firm and resisting to the touch. Both *kidneys* are tuberculous. They are sixteen lines in length by ten in breadth; upon the convex margin of the left, near its anterior extremity, is a deposit three lines in diameter, resisting to the touch, and elevated considerably above its surface; it is composed of numerous small white bodies; other tuberculous deposits, of various sizes, from that of a grain of sand to a line or more in diameter, are observed upon the surface, for which portion of the kidney they appear to have a predilection. *Bladder* healthy.

The Committee on Mr. Conrad's Description of new Shells reported in favor of publication.

Descriptions of new fresh water and marine Shells.

By T. A. CONRAD.

The following new fresh water shells from Georgia were kindly loaned me for description by J. Hamilton Couper, Esq.

UNIO.

U. securiformis. Suborbicular, thick, compressed; valves slightly convex; umbo flattened, marked with obtuse, narrow, divaricated plaits; plaits on the lower half of the valves obscure and interrupted; umbonial slope rounded; posterior slope with strong oblique plaits towards the apex; backs eroded; epidermis black; within white; cardinal teeth large, direct, profoundly sulcated. 1½ : 1¼.

Inhabits Flint River, Georgia.

U. stagnalis. Widely elliptical, ventricose, rather thin: towards the posterior extremity very thin and fragile; anteriorly regularly rounded; posteriorly somewhat pointed, with an acutely rounded extremity; basal margin regularly curved; summits prominent, eroded; posterior margin very oblique and nearly straight; epidermis ochraceous and olivaceous; rays green, not very distinct on the middle and anterior side, but more so posteriorly some rather broad, others linear; posterior slope dark colored, rayed; within white and highly iridescent posteriorly; cardinal teeth much compressed and oblique, double in each valve; lateral teeth very slightly curved, finely granulated. 3¼.

Inhabits mill ponds; Ogeechee River, Georgia.

U. Ogeecheensis. Elliptical, thin, inflated; posterior side somewhat pointed, extremity subangular; valves slightly contracted from beak to base; summits rather prominent, decorticated, slightly undulated; epidermis ochraceous with interrupted green rays, some of them broad; within white, highly irridescent posteriorly; cardinal teeth oblique, compressed; lateral teeth rectilinear. 3.

Inhabits Ogeechee River, Georgia.

Allied to the preceding, but has a lighter colored epidermis with more distinct rays, is proportionally longer; the cardinal tooth in the left valve is longer and less lobed, and the lateral teeth are straight, without granules, and less oblique than in the preceding species, which is a larger shell.

U. oratus. Widely elliptical, ventricose, gaping at both ends; posterior gape wide; anterior extremity rather acutely rounded; posterior margin sinuous, extremity subangular; basal margin forming a nearly regular curve: summits prominent; umbo and beak eroded; epidermis ochraceous, polished; cardinal teeth compressed, oblique; lateral teeth straight; within white, much stained with waxen yellow. 3¼.

Inhabits Flint River, Georgia.

This shell has the polished epidermis of U. cariosus, but is without a ray. It is longer in proportion than that species with very different cardinal teeth, which are much nearer parallel with the margin above: the shell also gapes far wider in the only specimen I have seen.

U. rosaceus. Widely elliptical, ventricose above; posterior margin obliquely truncated, slightly sinuous; extremity subangular or acutely rounded; epidermis ochraceous and dark brown; rays indistinct, frequently broad, but composed of fasciculis of lines; surface with fine radiating wrinkles; within deep rose-purple: cardinal teeth prominent, oblique, compressed, trifid or three teeth in the left valve. 3½.

Inhabits Savannah River.

Allied to U. ochraceus, *Say.*

U. contrarius. Elliptical, moderately thick: valves somewhat flattened or plano-convex; umbo and beak not prominent, much eroded; umbonial slope acutely rounded; posterior margin straight above, truncated, direct; epidermis deep ochraceous, with linear radiating wrinkles, and obscurely rayed about the umbo; within pale flesh-color sta,ned with waxen yellow; cardinal teeth direct thick, sulcated, not very prominent; lateral teeth reversed, or the double tooth in the right valve. 3 1-5.

Inhabits the Ogeechee River.

U. nucleopsis. Obtusely subovate, slightly oblique, thick, not ventricose; umbonial slope rounded; posterior slope with a few obscure plaits; posterior margin subtruncated; basal margin slightly tumid near the middle; epidermis ochraceous, with a series of green spots along the umbonial slope; posterior slope obsoletely striated; within bluish white; cardinal teeth thick, direct, single in the right valve. 1¼.

Inhabits Etowah River.

U. limatulus. Subelliptical, convex; posterior side somewhat pointed; umbonial slope angular; anterior slope subcarinated in the middle: posterior margin obliquely truncated: extremity truncated, direct; basal margin regularly rounded; beaks not prominent, eroded; epidermis highly polished, dark brown and ochraceous, obscurely rayed; within flesh color or pale salmon; cardinal teeth oblique, compressed double in each valve; lateral teeth long, slightly curved. 2.

Inhabits Savannah River.

U. *plectrophorus.* Trapezoidal, thick; valves flattened on the sides, slightly contracted, marked with irregular arched, obtuse, interrupted folds, extending from the beaks nearly to the base; umbonial slope angular; posterior slope plicated; beaks not prominent; profoundly eroded; ligament margin elevated; posterior extremity truncated obliquely inwards; basal margin contracted; epidermis thick, sulcated; lateral teeth slightly arched.

Inhabits Flint River, Georgia.

Allied to *U. Sloatianus* and *trapezoides*, Lea.

MARGARITANA, *Schum.*

M. Etowænsis. Oblong-ovate, thin and fragile, widely contracted from beak to base; umbonial slope ventricose, with a plano-convex or flattened surface; ligament margin rather elevated; posterior submargin slightly concave: umbonial slope angular posteriorly; beaks eroded; posterior extremity angular; margin rounded towards the base; basal margin subrectilinear; within bluish and purplish, iridescent; cardinal tooth in the right valve rather long, oblique, compressed, curved, prominent; in the opposite valve the tooth is widely bifid, the posterior lobe pyramidal.

Inhabits Etowah River.

Allied to M. Raveneliana, Lea.

MELANIA.

M. cælatura. Ovate-oblong, turreted; volutions 6, with longitudinal ribs and unequal prominent revolving lines, subnodulous where they cross the ribs; the ribs on the body whorl do not reach the middle; the color ochraceous and brown; aperture narrow, elliptical; labium with interior brown bands: superior part of columella somewhat callous.

Inhabits Savannah River.

Melania perangulata. Subulate; volutions 9 or 10, with an acutely carinated angle on all except the body whorl, which is subcarinated; on each whorl of the spire is a revolving granulated line above the carina; color olive brown.

Inhabits Savannah River.

Melania nebulosa. Elongate conoidal; volutions 6 or 7, with revolving raised lines; whorls of the spire carinated below the middle, above which they are longitudinally ribbed, and have 2 or 3 revolving granulated lines; granules compressed; aperture widely elliptical; color ochraceous, with brownish-black stains.

Inhabits Savannah River.

Melania percarinata. Elongate conoidal; volutions of the spire with a carinated line below the middle, and a revolving granulated line above; body whorl with a granulated revolving line near the suture, and 3 carinated lines, the superior one largest, the lower one fine; color dark olive brown.

Inhabits Savannah River.

Melania symmetrica. Subulate; whorls 9, slightly convex, with longitudinal slightly curved, narrow ribs, interrupted near the suture by a revolving granulated line; ribs on the body whorl not extending as far as the middle; margin of labrum profoundly rounded; color ochraceous and black.

Inhabits Savannah River.

Near the apex, two or three volutions have a fine granulated carinated line.

The following new and interesting Shells are from the coasts of Lower California and Peru, and were presented to the Academy by Dr. Thomas B. Wilson.

SOLECARDIA, *Con.*

Shell bivalve, equivalve; hinge with 2 diverging cardinal teeth, and a linear oblique cartilage pit between; cardinal plate profoundly grooved on each side of the teeth; muscular impressions 2, small, rounded, remote from the margins, particularly from the base; pallial impressions entire.

S. eburnea. Oblong oval, equilateral, ventricose, thin; extremities nearly equally rounded; basal margin arched; valves white, shining, minutely shagreened, towards the base minutely rugose, with fine impressed radiating lines; concentric lines towards the base finely waved, indenting the margin. 1 2-10: 8-10.

In this singular bivalve the pallial impression shows no junction with the adductor impressions, but joins the extremities of the cardinal plate. The muscular impressions are as distinct on the exterior as on the interior.

PETRICOLA.

P. sinuosa. Subtriangular; inflated anteriorly; profoundly sinuous posteriorly; ribs radiating, prominent, acute, except towards the anterior margin, where they are replaced by closely-arranged lines; basal margin profoundly sinuous; within brown, cavity of umbo white; cardinal teeth prominent, 2 in one valve, and one broad one in the other. 8-10: 6-10.

Family Anatenidæ.

CYATHODONTA, *Con.*

An inequivalved bivalve; hinge with a broad, not very projecting, cartilage fosset, which is carinated near the margin; muscular impressions rounded, indistinct; pallial impression with a large rounded sinus.

C. undulata. Subovate, inequilateral, very thin and fragile, with obliquely concentric undulations, profound on the anterior side, and suddenly becoming obsolete towards the posterior extremity, which is truncated and direct; posterior slope of the deeper valve obscurely tricarinated; cartilage pit robust; valves with minute, very closely arranged, granulated radiating lines. 1 2-10 : 1 nearly.

Family Pholadida.

PHOLADOPSIS, *Con.*

Inequivalved; right valve produced posteriorly, left valve overlapping the opposite; cartilage situated on a projecting callus.

P. pectinata. Ovate, very thin and fragile, profoundly gaping posteriorly; profoundly ventricose anteriorly; valves with elevated waved laminæ terminating near a profound sinus, which extends from beak to base; right valve undulated near the posterior end, reflected, margin pectinated; both valves have concentric lines.

PARAPHOLAS, *Con.*

P. bisulcata. Ovate-oblong; anterior accessory valve or deposit strong, shining gibbous on the margin of aperture, and having obscure decussated striæ, the transverse ones a little raised; anterior side of the larger valves with numerous prominent crenulated radii; a slightly oblique sulcus extends from beak to base, and a slightly impressed line runs from the beak to the posterior end of the closed portion of the base; between the two impressed transverse lines the valves have closely-arranged, rugose, longitudinal laminæ, and posterior to these the laminæ are remote and elevated. 2½.

PENITELLA.

P. Wilsonii. Ovate-oblong, very thin, profoundly ventricose; valves with a furrow from back to base; the papyraceous anterior valves very wide; anterior valves with numerous oblique waved laminæ, and radiating acute ribs; ligament margin sinuous; posterior side with concentric distant undulations; two small accessory valves behind the beak, which are reflected posteriorly; membranaceous appendage with a sinuous or concave margin where it joins the shell, and a deeper annular groove anterior to the middle. 2½.

TRITON.

T. perforatus. Subpyriform; volutions 5 or 6; ribs revolving, flattened, slightly prominent, wide and narrow alternately, with narrow interstices and an occasional revolving line; angle of body whorl tuberculated; spire scalariform, the angle of each whorl with a tuberculated rib or carina; color cinereus; epidermis brown, rough, hairy, longitudinally ribbed; aperture wide; margin of labrum sinuous above, profoundly ribbed; ribs about half an inch long, on an ochraceous submargin; columella with white folds, and narrow, dark brown interstices; beak bent, umbilicated. 3 8-10 : 2½.

OLIVA.

O. propatula. Ovate-oblong, slightly gibbous towards the base; color pale ochraceous, marked with a few longitudinal zigzag brown lines, and with darker transverse hair-like lines, and a few spots; columella patulous, deeply sulcated inferiorly; deposit at the base carinated in the middle. 2½ : 1 1-10.

The Committee on Mr. Cassin's Descriptions of new species of Nyctale and Sycobius, reported in favor of publication.

Descriptions of New Species of the genera Nyctale, Brehm., and Sycobius, Vieill.; specimens of which are in the collection of the Academy of Natural Sciences of Philadelphia.

By JOHN CASSIN.

Genus NYCTALE, *Brehm.* Handb. Nat. Vog. Deuts. p. 111.

Nyctale Harrisii, nobis.

Front, face, nuchal collar, and under surface of the body yellowish white, or buff color.

Spot between the eye and the bill, and a broad occipital band, black,—the latter covering the greater part of the hind head.

Feathers covering the ear, black.

Throat with a few black feathers, and many of the feathers of the ruff on the front neck conspicuously tipped with black.

Upper surface of the back and wings deep reddish-brown; wing coverts with conspicuous round spots of white; all the quill feathers also irregularly marked and spotted with white on the edges of both webs; scapulars largely edged with white and buff.

Upper tail coverts brown, spotted with white. Tail black, with about three pairs of rounded white spots on every feather. Tarsi thickly feathered to the toes, and with the whole under surface of the body buff color.

Total length of skin, from tip of bill to end of tail, about 7½ in.; wing, 5¾; tail, 2⅔ inches.

Hab. South America?

The specimen now described was obtained from Mr. J. G. Bell, Taxidermist, of New York, who has no accurate recollection of its locality, but is of the opinion that it came from South America.

I have named this singular and beautiful little species in honor of Mr. Edward Harris, of Moorestown, N. J., Chairman of the Ornithological Committee of this Academy, and a distinguished naturalist.

Genus SYCOBIUS, *Vieillot.*

Sçobius scutatus, nobis.

♂ Upper part of the head and neck, broad pectoral band and under tail coverts bright crimson; the crimson of the breast uniting on the sides of the neck with that of the head.

Throat and ears black,—which color forms a large gular patch extending to, but scarcely including the eyes.

All other parts of the body black.

♀ Broad pectoral band and under tail coverts crimson; all other parts, including the head, black.'

Total length of skin from tip of bill to end of tail, about 5¾ inches; wing, 3⅝; tail, 2⅜ inches.

Hab. Western Africa.

Two pairs of the species now described were brought to this country by Robt. MacDowell, M. D., Surgeon attached to the colonial government of Sierra Leone, who collected them in Western Africa.

It bears a greater resemblance to the Sycobius rubricollis, (Swainson,) Vieill. Ois. chant. pl. 43, than to any other species which I have found described ; but from this and others it may readily be distinguished by its under tail coverts being crimson, and also by its broad pectoral band of the same color.

The Committee on Mr. Cassin's "Notes on the Vulturidæ and Strigidæ in the Collection of the Academy," reported in favor of publication.

Notes of an Examination of the family Vulturidæ, in the collection of the Academy of Natural Sciences of Philadelphia.

By John Cassin.

1. *Gyps fulvus*, (Gm.)

Under this name, either Ornithologists have confounded several distinct species, or the species itself assumes an unusual variety of characters. There are now exhibited in the collection of the Academy, sixteen specimens of Vultures, which have been described as at least four species ; but as they all bear more or less intimate relationship to the Gyps fulvus, (Gm.) of Europe, their claims as distinct species have been but partially recognized, and a question seems to be whether the birds so described, which I may observe, are, for the greater part, from widely different localities, really present characters sufficient to entitle them to specific distinction, or only such as may be attributed to age or season, or to what naturalists have rather vaguely called variety.

I have long held as a principle, that however small a peculiar character may be, if it is regularly and constantly reproduced in the generation of an animal, or in other words, is uniformly and with certainty transmitted from parent to offspring, that animal is entitled to be regarded as a distinct species, and is different from any other.

The transmission of character can be, of course, most satisfactorily ascertained in the natural habitation of the species, but if a series sufficiently extensive, or any considerable number of specimens, invariably present a peculiar character, the student in a museum may assume, quite justly, that he has sufficient evidence.

In the present case the number of specimens is not sufficiently large to warrant a conclusion, but they appear to present uniformly different characters enough to induce the opinion that the following are specifically distinct : *Gyps fulvus*, (Gm.;) *Gyps Kolbii*, (Daub.;) *Gyps indicus*, (Temm.;) *Gyps tenuirostris*, Hodgson.

2. *Gyps indicus*, (Temm.)

This species is in an extraordinary state of confusion.

Mr. Temminck describes and figures a Vulture in Pl. Col. i., liv. 5, pl. 26, supposed by him to be the "Vultur indicus, Lath.," which name and authority, he gives at the head of his article, and in the text of same vol., liv. 72, art. V. imperialis, alludes to it as the same as Vultur leuconotus, Gray. Ill. Ind. Zool.

pl. 15, which differs so entirely from M. Temminck's plate, that the latter must have considered it as either the young or adult of his species. But it appears that V. leuconotus, Gray, is the adult of Vultur bengalensis, Gm., and it also appears that M. Temminck's plate does not represent the last named species in any known state of plumage, consequently his text and plate refer to different birds.

Col. Sykes in "Catalogue of Birds, observed in Dunkun," Proc. Zoo. Soc., London, 1832, p. 77, gives " Vultur indicus, Lath., Temm., Pl. Col. 26," as an abundant species, and the remark is inserted that " Col. Sykes' specimens are no doubt referable to M. Temminck's species.''

Mr. H. E. Strickland, in Ann. and Mag. Nat. Hist., xiii., p. 34, presumes Vultur leuconotus, Gray, to be the same as Vultur indicus, Temm.; and in same volume, p. 205, mentions V. indicus, Scop. and Lath., and V. indicus, Temm., as though he meant two species.

Mr. E. Blyth, in " Remarks upon the birds presented by Mr. Hodgson, to the British Museum," same journal, xx., pp. 315, 387, insists that " Vultur indicus, Scop. and Lath., in Gyps tenuirostris, Hodgson," so that whenever he speaks of Vultur indicus, (as in same journal, xiii., p. 115,) he means, of course, Gyps tenuirostris, Hodgson.

M. C. J. Sundeval, in same journal, xviii., p. 459, speaks of V. indicus, Temm., as a species similar to V. fulvus, but different from V. bengalensis, and evidently is of opinion that V. indicus is distinct from either. He states, too, that he saw none near Calcutta, which were yellowish-brown, and therefore " presumes that the so colored Vultur indicus, never, or rarely, occurs near Calcutta."

Mr. J. E. Gray, in Catalogue Rap. Birds in Brit. Mus., insert "Vultur ndicus, Temm.," as synonyme for the Gyps fulvus, Gm.

All the four specimens labelled " Vultur indicus," in the Rivoli collection, are also labelled as coming from South Africa. These specimens comprise two young, one male probably adult, and one female, also probably adult. The young certainly bear a much greater resemblance to M. Temminck's plate than do any others in the collection; hence I am inclined to the belief, that Vultur indicus, Temm., Pl. Col. 26, is an African bird, and, as stated in the preceding article a distinct species.

What " Vultur indicus, Scop. and Lath." may be, is more than I can tell from the descriptions, but at any rate, I see no reason to cavil at Mr. Blyth's conclusion; the descriptions of both Scopoli and Latham, and especially the figure in Sonnerat's Voy. India, ii., pl. 105, do appear to me, however, quite unsatisfactory.

3. *Sarcoramphus gryphus*, (Linn.)

Naturalists and travellers seem to have decided that the male of this species is the larger. If this is true, it appears to be the only instance in which such is the case in the Rapacious birds, and is a singular exception to the general rule that the female is the larger in this order.

4. *Cathartes aura*, (Linn.)

British and American Naturalists consider this name as applicable to the bird figured by Wilson, Am. Orn. pl. 75, fig. 1, and Audubon, B. of Am. pl. 151; but some continental European authors have applied it to the Carthartes jota, Molina which is understood to be the same as Vultur atratus, Bartram Travels, p. 289, figured by Wilson, Am. Orn. pl. 75, fig. 2. and Audubon, B. of Am. pl. 106.

The former are correct, and the latter appear to have been led into error by the statement of Buffon who figures the C. jota in Pl. Enl. 187, and states in the text Pl. Enl. i, p. 136, that it is called "ouroua ou aura." Daudin, Traité d'Orn. ii. p. 19, under C. aura, cites Buffon's plate. Spix. Av. Bras. i. p. 2, describes the C. jota under the name of Cathartes aura, and also cites Buff. Pl. Enl. 187. Vieillot, in Ois. de l'Am. Sept. pl. 2, figures C. jota, and in his text cites Vultur aura, Linn. as a synonyme, though he also figures the true C. aura, Linn., pl. 2, bis. and gives its correct name.

M. D'Orbigny, in Voy. dans l'Am. Merid. Ois. p. 31, although he describes and figures the C. aura by its proper name, yet quotes C. jota, "Ch. Bonap.," and Vultur atratus, Wilson, Orn. Am. ix. pl. 75, fig. 1, as synonymes, which is an error, as he would readily have ascertained by referring to Wilson's figure as quoted by himself.

There is moreover a further difficulty. It seems desirable to know whether Linnæus described from North or South American specimens, as the Prince De Wied has described the North American bird as a species distinct from the C. aura, Linn., under the name of Cathartes septentrionalis, De Weid ;—the original description I have not seen, but it is copied at length in Tschudi's Fauna Peruana, Orn. p. 74.

It is probably now quite impossible to ascertain from what part of America the specimens described by Linnæus were actually brought, but fortunately the difficulty last stated, as well as all the former, is easily settled without such knowledge.

As synonymous with Vultur aura, Linnæus himself in Syst. Nat. 12th edition, i., p. 122, cites Catesby, Carolina, 1. pl. 6, and Sloane's Jamaica ii., pl. 254, both of which are clearly the same bird as that figured by Wilson and Audubon, under the same name, so it would appear sufficiently evident that whatever other species may inhabit America, the common bird of North America is the true C. aura, Linn. I beg leave to add, that that excellent observer and accurate naturalist Mr. George Ord, expressly states, in Am. Orn. ix., p. 99, "The Vultur which Sir Hans Sloane has figured and described is undoubtedly the Vultur aura," that is to say, it is the same as the species figured by Wilson.

The figure of the head in D'Orbigny's Voyage dans l'Am. Merid., pl. 1, fig. 3, appears to me to be that of the true C. aura, Linn., or the same as the North American species, and the same as that described by Spix Av. Bras. 1, p. 2, under the name of Cathartes ruficollis, Spix, which is, therefore, a synonyme.

5. *Cathartes Burrovianus*, Cassin.

This is a species described by me from a specimen brought from Mexico, and is the smallest of all known Vultures. The Rivoli collection contains one specimen of this bird, which is more adult than the specimen described.

This may be the species which is alluded to by Pennant, in Arctic Zoology, (as quoted by Mr. Ord,) who says that the Turkey Vulture of the West Indies is "far inferior in size to that of North America."

The plumage of the specimen in the Rivoli collection, is clear black, like that of the specimen previously in the collection of the Academy; the secondaries having slightly paler margins, but with no mixture or edging of brownish which prevails in the plumage of all the specimens of C. aura which I have seen. The feathers on the neck, instead of forming a perfectly circular, or ring-like ruff, as in C. aura, in the present species, extend decidedly upwards on the back of the neck; in the specimen here alluded to, almost to the occiput. The following are the measurements of the two species.

	C. aura, (Linn.)	C. Burrovianus, Cassin.
Total length from tip of bill to end of tail (mounted specimens,)	30 inches.	22 inches.
Wing from flexure to tip of longest primary,	23 "	18 "
Tail,	12 "	8½ "
Tarsus,	2¾ "	2½ "
Bill from gap direct to tip,	2½ "	2 "

6. *Cathartes jota*, (Molina.)

I am not without suspicion that the bird described by the Abbe Molina, in Essay on the Natural History of Chili, p. 245, (M. Gruvel's French translation,) is not the same as the Vultur atratus, Bartram, Travels, p. 289.

There are in the collection of the Academy three specimens which are clearly the latter, being the same birds given by Wilson and Audubon; one of these was presented by Mr. Audubon, another was obtained in Florida, and presented by Dr. McEuen; the third belongs to the Rivoli collection, but there is a fourth specimen which is materially different. It belongs to the Rivoli collection and is without label.

This last specimen is not only much smaller than the former, but it has the head quite smooth and not carunculated or rugose, as in the common species of North America. In fact its head resembles that of the C. aura, (Linn.,) more than it does the C. atratus, (Bart.,) and is covered by such a comparatively clear and smooth skin that I can readily suppose it to be colored in the living bird, which would be strictly as described by the Abbe Molina, or at least as his French translator says for him, p. 246, " sa tête est sans plumes, converte d'une peau ridée *de couleur rousse*." Mr. Audubon, Orn. Biog. ii., p. 52, describes his bird as " the head having a black, rugose, carunculated skin, sparsely covered with short hairs and downy behind," which is precisely the case in the three specimens alluded to, but I quote Mr. Audubon's description, because he, as well as the Abbe Molina, probably described from recent specimens.

The one specimen here alluded to is as above stated smaller than either of the others, as will appear by the following measurements,

	Mr. Audubon's specimen.	Smaller specimen.
Total length from tip of bill to end of tail,	25 inches	19½
Wing from the flexure to tip of longest primary,	17 "	15½
Tail,	7½ "	7

7. The family Vulturidæ has been arranged apparently in a manner only provisional according to the Natural System, by Mr. Swainson, Lardner's Cab. Cy. Birds, i. p. 280, and ii. p. 205.

Notwithstanding such high authority as Mr. Swainson, I am disposed to think the Gypinæ (of my catalogue) the subtypical group, and the Sarcoramphinæ appear to me to present characters sufficient to warrant the conclusion that they are the true Rasorial Vultures.

In confirmation of my opinion of the Sarcoramphinæ, I may refer to the well known fact that the species of Cathartes are amongst the most confidant and familiar of birds, and that such disposition seems also to extend to Sarcoramphus. In a note to "Remarks on the Birds observed in Upper California," by Dr. William Gambel, in Jour. Acad. Nat. Sci., Philada. new series, (Quarto) Vol. i. p. 25, he mentions having seen at Valparaiso a specimen of the Condor so completely domesticated that it was allowed to roam the city at large, and so entirely docile that it offered no resistance to being handled, and would even permit the caresses of children, or their attempting to get upon its back. "In fact," he continues, "I think I have never met with any bird which exhibited more tameness or greater confidence in man than this large Condor.

After first premising that in all matters relating to Natural History I am a strict circularian of the school of MacLeay, Vigors and Swainson, I beg leave to present the following as my views of the classification of the subfamilies of Vulturidæ.

1. Typical, Vulturinæ.
2. Subtypical, Gypinæ.
3. Natatorial, Gypaëtinæ.
4. Grallatorial, Neophrinæ.
5. Rasorial, Sarcoramphinæ.

8. The collection of this Academy contains, probably, all the known Vultures. The only exceptions being, first, the species labelled "Gyps tenuirostris, Hodg.?" it is possible may not be that bird; and second, a bird figured in Brown's Illustrations of Zoology, pl. 1, London, 1776, which is Falco ambustus, Gm., and Vultur ambustus (Gm.) of Latham, and said to inhabit the Falkland Islands, is not in the collection. I suspect, however, that the latter is not truly a Vulture, though it is difficult to determine from the plate above cited.

There are exhibited in the collection of the Academy sixty-eight specimens of Vultures, which represent nineteen species, including as species the Gyps indicus, (Temm.) G. Kolbii, (Daud.) and G. tenuirostris, Hodg.

The Committee on Dr. S. G. Morton's, paper, entitled "Additional observations on a new species of Hippopotamus," reported in favor of publication in the Journal of the Academy.

ELECTION OF MEMBERS AND CORRESPONDENTS.

Francis Gurney Smith, M. D., and Prof. William E. Horner, of Philadelphia, were elected *Members*, and the following gentlemen elected *Correspondents*:

Henry W. Ravenel, Esq., of Black Oak, South Carolina.
Myddleton Michel, M. D., of Charleston, South Carolina.